

Title (en)

PHOTOIONIZATION DETECTOR AND METHOD FOR GAS SAMPLE ANALYSIS

Title (de)

PHOTOIONISATIONSDETEKTOR UND VERFAHREN ZUR GASPROBENANALYSE

Title (fr)

DÉTECTEUR DE PHOTO-IONISATION ET PROCÉDÉ D'ANALYSE D'ÉCHANTILLON DE GAZ

Publication

**EP 4139671 A4 20231018 (EN)**

Application

**EP 21792710 A 20210422**

Priority

- US 202063015125 P 20200424
- CA 2021050553 W 20210422

Abstract (en)

[origin: WO2021212229A1] A photoionization detector (PID) is disclosed that includes an ionization chamber configured to allow a flow of a gas sample therethrough, the ionization chamber defining an ionization region and a detection region, a photoionization source configured to generate ionizing radiation for irradiating the flow of the gas sample in the ionization region, an electric-field ionization source configured to apply an ionizing electric field inside the ionization chamber to intersect the flow of the gas sample in the ionization region, the ionizing radiation and the ionizing electric field being configured to ionize the gas sample, and an ion detector configured to detect, in the detection region, an ionization current resulting from the ionized gas sample. The PID may also include an optical window, for example, made of a window material including sapphire, configured to allow at least part of the ionizing radiation to pass therethrough prior to entering the ionization region.

IPC 8 full level

**G01N 27/66** (2006.01); **G01N 27/68** (2006.01)

CPC (source: EP US)

**G01N 27/64** (2013.01 - EP US); **G01N 27/68** (2013.01 - EP)

Citation (search report)

- [XYI] EP 1726946 A1 20061129 - SYAGEN TECHNOLOGY [US]
- [Y] EP 1059530 A2 20001213 - RAE SYSTEMS INC [US]
- [Y] EP 1229995 B1 20080917 - RAE SYSTEMS INC [US]
- See also references of WO 2021212229A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

**WO 2021212229 A1 20211028**; CN 115702346 A 20230214; EP 4139671 A1 20230301; EP 4139671 A4 20231018; US 2023145929 A1 20230511

DOCDB simple family (application)

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